

E. coli

O157:H7

March 2007

the pathogen...

Source:

E. coli bacteria naturally live in the intestines of animals. Contamination with animal waste can transfer the *E. coli* to other items (meat, produce, or water), which may then be consumed by people.

Symptoms:

E. coli O157:H7 is a type of *E. coli* that produces a toxin. This toxin can cause severe damage to the lining of the intestine. The symptoms of an *E. coli* O157:H7 infection include diarrhea (often bloody), severe abdominal pain, and little or no fever. People at high risk can develop a form of kidney failure known as Hemolytic Uremic Syndrome (HUS). Symptoms of HUS are severe kidney failure, anemia, and thinned blood.

Incubation:

Symptoms usually appear within 3-4 days after eating contaminated food or water, but may occur anywhere from 1-10 days after consumption of the food.

Duration:

The illness usually lasts for 5 to 10 days. Although most healthy adults recover within a week, about 1-15% of *E. coli* O157:H7 cases may have severe complications.

YOPIAlert:

People of all ages can get *E. coli* O157:H7 infection; however, children under 5 and adults over the age of 65 tend to develop severe symptoms. Patients taking antibiotics or antacids may also be at increased risk.

the problem...

There are many different types of *Escherichia coli* (*E. coli*), some of which cause illness. One that can cause severe illness, *E. coli* O157:H7, is traditionally linked to undercooked beef products; however, outbreaks have been linked to several different sources, including fresh produce and unpasteurized fruit juice, milk and cheese. Food may become contaminated with *E. coli* through contact with feces, or from water drained from pastures containing animal waste. Water which contains sewage, when used for drinking or swimming, has also been a source of *E. coli* infections. If a person is infected with *E. coli*, improper handwashing may also spread the bacteria to other people.

Past *E. coli* O157:H7 outbreaks in Washington State have been linked to undercooked hamburger, unpasteurized apple juice and, most recently, spinach. In the fall of 2006, a foodborne illness outbreak with over 200 reported *E. coli* O157:H7 cases from 26 states was linked to the consumption of fresh spinach. The contaminated spinach was traced back to four farms in California, and the outbreak strain of *E. coli* was identified from cattle waste on one of the ranches. Three Washington residents from Benton, Cowlitz, and Island counties were reported with the outbreak strain of *E. coli* O157:H7 from the spinach.

During the 2006 spinach outbreak, bagged fresh spinach products were voluntarily recalled from the shelves of grocery stores and food establishments. Consumers were advised to throw away spinach from certain brands. If they chose to cook the product, the Centers for Disease Control advised consumers to cook the spinach to 160°F or more for at least 15 seconds.

Read more online:

The Centers for Disease Control 2006 *Spinach Outbreak*:
www.cdc.gov/ecoli/2006/september/

The Food and Drug Administration Bad Bug Book: *E. coli*
www.cfsan.fda.gov/~mow/chap15.html

the prevention...

At work:

- Ensure whole cuts of beef **cook** to an internal temperature of 145°F (ground or pinned beef to 155°F) for at least 15 seconds. *Remember: if you serve undercooked animal foods you need to provide a consumer advisory.*
- **Wash produce** under cold, running water from an approved source.
- Employees diagnosed with *E. coli* O157:H7 must **alert their person in charge** and be restricted from working with food or clean utensils. The health department must also be contacted.
- **Avoid cross-contamination:** separate raw animal foods from ready-to-eat foods, wash equipment and utensils properly, store raw meats below other foods, and wash hands as required.
- **Know your source** and product information to be able to participate in product recalls.



At home:

- **Wash hands** with soap and warm water for 20 seconds after using the restroom, touching raw meat, or visiting petting zoos.
- **Store raw meat in water-tight containers** in the refrigerator so it doesn't drip germs onto other food.
- Keep beef at the **right temperature**: Keep it cold at 41°F and cook it to 155°F.
- When working with raw meat, do not prepare any other foods until you are able to **wash the utensils** and your hands. For example, wash a platter used for carrying raw meat to the grill before you put cooked meat on it.
- For an **extra step for safety**, make a mild sanitizer (1 teaspoon bleach in 1 gallon of water) to kill germs. This sanitizer can be applied to counters and utensils after you wash them. Allow the dish or counter to air dry after you use the sanitizer.